12. *M. sanguinicollis.*

M. elongatula, postice subdilatata, crebre punctata, nigra, thorace rufo, elytris rufo vittatis; *caput* punctatum, rufum; *thorax* in medio transverse depressus, lateribus rotundatis, punctatus, rufus; *scutellum* impunctatum, rufum; *elytra* versus apicem subdilatata, satis depressa, crebre punctata, rufa, vittis duabus parallelis (subsuturali et laterali) basin sed vix apicem attingentibus, post medium elytrorum conjunctis; *antennæ* nigræ, art. basali interdum rufo; *pedes* et *corpus subtus* vel nigra vel rufo-fusca.

Long. corp. lin. $3\frac{1}{3}$–$4\frac{1}{2}$; lat. lin. $1\frac{3}{4}$–$2\frac{1}{4}$.

I have examples of this species from Bolivia, and also from Brazil.

[To be continued.]

XXXI.—*On the Occurrence of* Orcynus alalonga *on the Coast of Devon.* By Dr. W. R. Scott.

Several fish of but rare occurrence in British waters have from time to time been taken on the Cornish and Devon coasts. The close and accurate observations of Mr. Couch have seldom allowed any found on the former to pass unnoticed. On the coast of Devon, however, recorded captures of these rarer species are less common, owing probably in some degree to the want of that zealous watchfulness which has animated the labours of the Cornish ichthyologist. Amongst the rarer species that pay our coasts an occasional visit are those of the genus *Thynnus*; and amongst the very rarest of these is the Germon, separated now, however, by Cuvier into a distinct genus, and which fish he has named *Orcynus alalonga*, from the length of its pectoral fin—which constitutes the chief, if not the only, difference between it and the true Tunnies.

The *Orcynus alalonga* has been very rarely found in British seas. One has been recorded as taken at Portland, which was presented to the British Museum, and it has been twice taken in Mounts Bay, Cornwall.

I have pleasure, therefore, in now recording another specimen of this rare British fish, taken in Devonshire. This fish was captured on the 26th of August last, not really in channel, but a little way up the river Exe, about three miles from its mouth, and at about half-tide. The fish had got entangled amongst some palings which had been driven into the river about a foot from the edge, where a kind of quay had been made, and which formed a *cul-de-sac*. Into this the fish got; and so violent were its struggles to get out, that it drew the attention of some workmen who were at a little distance, when one of them got his gun

and shot it. They describe its efforts to free itself as shaking the palings like the strength of two men, which agrees with the observations of Mr. Couch, who says that a specimen taken in Mount's Bay showed "extraordinary strength when caught with a line."

Unfortunately I did not hear of this fish having been captured till a week after, and when it had become much putrified, and, indeed, had been buried; so that I cannot give so full and accurate a description of it as might be desirable. Still enough remained to show to what species it belonged; and on showing the plates of the Tunnies in Mr. Couch's volume to the person who killed it (an intelligent foreman of some works near the river), he declared it to agree with that of the Germon.

The shot by which the animal was killed had destroyed all the first dorsal fin and part of the second, so that no examination could be made of these; but the general form was not much injured, and the other fins remained sufficiently defined to enable me to mark their position and numbers; and the pectoral fin, one of the most important in identifying the species, was the least injured of all. From this state of the fish I was enabled to note the following particulars.

The full length of the fish, from the nose to the base of the caudal fin, was 24 inches, the girth round the pectoral fin 19, and the girth immediately in front of the second dorsal 15½ inches; the flesh in this part was very firm and solid.

The head was pointed, the under jaw slightly the longest, the teeth small and incurved, and the gape about 4 inches; the nostrils very obscure; the eye was large, and, when fresh, was slightly elevated, and placed over the angle of the mouth. The sections of the gill-covers were well defined; and from the nose to the gill-opening was about 7 inches.

The pectoral fin, lodged in a deep depression, was 8½ inches long, and reached to about the middle of the anal fin. I could not say if the anal and second dorsal were falcated, as the upper parts of both had perished; but I was informed that both were so. I could trace that there was a short space between the first and second dorsal fins, and that the finlets were eight above and seven below, which I was told had been tinged with yellow, but not so deeply as are those in Mr. Couch's plate. The tail was deeply cleft; but, one-half being gone, I could only judge of this approximately. The weight of the fish when caught was twelve pounds, and nothing was found in its stomach.

On comparing this fish with the figure given by Couch, I thought the latter more slender for its length than the former; but this appearance might have arisen from the body having become depressed, from the treatment to which it had been

subjected. The length of the pectoral fin was also not so great as that figured by Couch. The proportions given in the specimen killed at Portland are—length of body 30 inches, length of pectoral fin 11½ inches; while in the specimen examined by me the length of body was 24 inches, and the pectoral fin 8½ inches. This latter length, however, comes quite up to that given by Cuvier for the species. He says the *Scomber thynnus* has the pectoral fin one-fifth part of its length, while the *Orcynus* has it one-third the length of the body, and that this difference is the only one between the two fishes. It will be seen, then, that 8½ inches is nearly the proportion given by Cuvier, being a little more than one-third of 24 inches, the full length of the fish.

It is fortunate that the pectoral fin was sufficiently perfect to allow of its being accurately measured, and thus enable us to record another instance of this south-of-Europe fish paying a visit to our northern shores.

It is further worthy of remark that Mr. Couch has reported the capture of the *Short-finned Tunny* (a fish never before taken on our coasts) on the 16th of August last. It would be interesting to know what causes have led these fish so far north on this occasion.

XXXII.—*Proofs of the Animal Nature of the Cilio-flagellate Infusoria, based upon Investigations of the Structure and Physiology of one of the* Peridinia (Peridinium cypripedium, *n. sp.*). By Prof. H. James Clark, A.B., B.S.*

[Plate XII.]

Whatever tends to elucidate the doubtful nature of any group of beings which stands undecided (as it were on the dividing line) between sentient and non-sentient things has an importance at the present day which would not have been deemed worthy of very grave consideration before the theories of Spontaneous Generation and what is sometimes mistakenly called Darwinism had been revived. The resurgence of these doctrines has given a prominence to the discussion of the character of the lowest, obscure forms of life, simply because, in their extreme simplicity, they hardly seem to rise above a state of inorganic nature, and their vitality is exhibited in such a guise as would readily be mistaken for the operation of exo-endosmotic, inanimate, inorganic forces. Hence the readiness, the eagerness, with which the physicists of the Materialistic school clutch at these "toys"

* Communicated by the Author, having been read before the American Academy of Science and Arts, February 14, 1865.